MEMORADNUM

March 25, 2010

TO: Science Panel Members

Bruce Duncan, Ph.D., Chair, Science Panel, U.S. EPA Region 10
Elaine Faustman, Ph.D., University of Washington
Teri Floyd, Ph.D., Floyd/Snider
Michael Riley, Ph.D., S.S. Papadopulos & Associates
Rosalind Schoof, Ph.D., Environ International Corp.

FROM: Martha Hankins, Dept. of Ecology, Toxics Cleanup Program

cc: Dave Bradley, Pete Kmet, Craig McCormack

SUBJECT: Upcoming Science Panel Meeting

DETAILS: Meeting Date: March 25, 2010 (Thursday)
Time: 9 am – 3:30 pm, lunch provided
Location: UW Botanic Gardens, Isaacson Classroom, 3501 NE 41st St, Seattle

Enclosed are the agenda and meeting materials prepared by the Department of Ecology. The brief overview below is provided to help focus your review of the enclosed information. We look forward to seeing you at our March Science Panel Meeting.

MEETING MATERIALS AND TOPICS

As part of Ecology's ongoing efforts for updating the MTCA Cleanup Regulation, we have several topics for discussion on March 25. Ecology will briefly review some of the details associated with the ongoing efforts to update the regulation; review important elements of the MTCA/SMS Advisory Group meeting related to early-life exposure; conclude the discussion on early-life exposures to carcinogens; and discuss implications of new toxicological information.

Consideration of Early-Life Exposure to Carcinogens

At the previous Science Panel meeting, November 16, 2009, Ecology presented information regarding the increased susceptibility of children from environmental exposures to carcinogens. Based on input from that meeting, Ecology has completed a technical support document on early-life exposures to carcinogens.

The focus questions presented here are intended to clarify and confirm the technical position of the Science Panel regarding early-life exposure to carcinogens. The guiding questions for this discussion are:

- Does new technical information and regulatory guidance provide a technically defensible basis to revise the MTCA rule to account for early-life exposures?

- Is there additional technical information & regulatory guidance on early-life exposures that Ecology should consider to revise the MTCA rule?

Specifically, Ecology is asking:

1. Is there sufficient (quantity and quality) technical/scientific information to define the patterns of susceptibility of children distinguishable from adults in responding to exposure from xenobiotics (chemical carcinogens)?

2. State and federal analysis and subsequent regulatory guidance propose similar age bins and corresponding adjustments to account for early-life exposure to carcinogens. Do the members of the Science Panel agree with the state and federal analysis and subsequent regulatory guidance regarding the age bins and corresponding adjustments to account for early-life exposure to carcinogens?

3. A clear distinction is drawn between the science policy decision made by the U.S. EPA to apply early-life age adjustments ONLY to those carcinogens that operate by a mutagenic mode of action and the California-EPA (Cal-EPA) to apply similar early-life age adjustments to ALL carcinogens. Do members of the Science Panel agree with the science policy decision, based on informed science, to apply the early-life age adjustments ONLY to those carcinogens that operate by a mutagenic mode of action or to apply early-life age adjustments to ALL carcinogens?

Revisions to Air Cleanup Level Equations

Because of the short time allowed for discussion at the November 2009 Science Panel meeting, Ecology would like to revisit this topic. As noted in our November meeting, the U.S. EPA no longer recommends oral to inhalation extrapolation because of differences in the toxicokinetics between the oral and inhalation routes of exposure.

Consistent with the U.S. EPA inhalation risk assessment guidance, Ecology is considering discontinuing the assumption that the adverse effects resulting from oral exposures are the same as the effects from inhalation exposures. This means changing the MTCA air cleanup equations to use the inhalation toxicity values directly in the cleanup equations and applying the inhalation toxicity metrics as published in IRIS.

1. Is this approach consistent with current scientific information?

Updating Method A Cleanup Levels for Ground Water and Soils

As part of the MTCA Cleanup Regulation Update, Ecology is considering updating Method A cleanup levels. Review of the Method A cleanup tables provides a mechanism for discussing both the scientific, policy and practical implications of those issues.

For our March 25 discussion, Ecology would like the Science Panel members to focus especially on questions 2 and 4 below. (We are also having discussions on this topic with our MTCA/SMS Advisory Group members, who are meeting on March 22, 2010.)

1. Priorities for Further Review: Based on the Ecology's evaluation (Updating Method A Cleanup Levels for Ground Water and Soils) the majority of substances on the Method A list are not going to change.

    - Do you agree or disagree with these initial conclusions?

    - If not, do you know of additional information that would assist Ecology to evaluate those substances that you believe require further review?

2. Hierarchy of Toxicological Information: When available, Ecology uses toxicity values published in the IRIS database to establish risk-based cleanup levels. When toxicity values are not available, the MTCA rule identifies additional information sources of toxicity values. (Please refer to figure 5.1, page 33-34, in the document titled: *Preliminary Review of Method A Cleanup Levels for Groundwater and Soil*). In evaluating the hierarchy of information, Ecology would like the Science Panel to focus on the following questions:

    - Do you believe the ORNL/EPA website provides a reasonable source of toxicological parameters when such values are not included in the IRIS database?

    - If not, how should Ecology select toxicity parameters when values are not included in the IRIS database? Are there any substantive criteria (such as publication date, peer review) that you believe would help guide Ecology when making these decisions?

    - The ORNL/EPA does not provide the same opportunities for peer and public review that EPA provides when preparing IRIS values. Do you have any suggestions on the process/procedures that Ecology might use when using values from ORNL/EPA website or other sources (such as consultation with Washington DOH, EPA, and scientific review panel)?

3. Magnitude of Changes: Ecology is often faced with decisions during rulemaking and/or periodic reviews of cleanup actions on how to deal with new scientific information that indicates that a higher or lower cleanup level is appropriate.

    - How big of a change in a risk-based cleanup level warrants revisions to the Method A Tables?

4. Need and Priority for Addressing Risk Assessment Issues: Ecology has identified several risk assessment issues associated with updating the Method A cleanup levels for one or more of the hazardous substances. Ecology would like the Science Panel to consider the following questions:

    - Do you agree that these issues should be addressed when updating the Method A cleanup levels?

    - Do you have opinions on the relative priority for addressing these issues during the current rulemaking process? For example, how do some of these issues

compare (priority-wise) with issues surrounding fish consumption rates and bioaccumulation factors (BAFs) and biota-sediment accumulation factors (BSAFs)?

- Are there other risk assessment issues that you would recommend that Ecology consider when updating the Method A cleanup levels for one or more substances?

This is a full agenda and we very much appreciate and look forward to your input. I have also reserved a bit of time at the end to preview topics that Ecology expects to be on the Science Panel agenda for future meetings.

Finally, the enclosed documents include a paper on lead. Although this topic is not on the agenda for this meeting, please expect it to return for a future meeting. We've included this paper now as this topic is being discussed with the MTCA/SMS Advisory Group, and this provides a status update on where Ecology is with this issue.

Regards,

Enclosures:

1. Agenda
2. Preliminary Review of Method A Cleanup Levels for Groundwater and Soil
3. Updating Cleanup Levels for Lead-Contaminated Soils
4. Procedures for Evaluating Inhalation Risks
5. Considerations of Early Life Exposure to Chemical Carcinogens
6. Early-Life Exposure to Chemical Carcinogens: Looking at Benzo[a]Pyrene as an Example for Updates to the Model Toxics Control Act Cleanup Regulation